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09/540,470	03/31/2000	Hiroshi Takano	080398.P257	2482

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EXAMINER

MANNING, JOHN

ART UNIT PAPER NUMBER

2614

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/540,470

Applicant(s)

TAKANO ET AL.

Examiner

John Manning

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 15-27, 31 and 32 is/are rejected.
- 7) ☒ Claim(s) 11-14 and 28-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, with respect to claims 1-10 and 15-25 filed June 28, 2004 have been fully considered but they are not persuasive. The applicant argues that Ogino "fails to teach, disclose or suggest preparing receive, transmit and conversion capability information of each of a plurality of devices with regard to signal format". Ogino discloses that the "The interoperability model in the HAVI architecture provides for the following: 1) support for existing devices; 2) a default control model; 2) a means to extend the default control model when new devices or functionality is brought to market; and 4) a common means for device representation (e.g., graphics user interfaces)" (Col 6, Lines 41-46). Furthermore, when "new devices join the home network, they are recognized and added to a global name database (registry). The registry holds information about their characteristics and provides a reference to a handler (e.g., communication point) for that device. Other devices and services are able to query the registry to locate a device and then, using the handler, can interact with the device" (Col 6, Lines 58-63). "When a device is initially added to the home network, the system queries the device to ascertain its characteristics and capabilities. Once a device's characteristics are known, the architecture provides two methods of controlling it. The first method, level one interoperability, uses a predefined message set based on IEEE 1394 AV/C-CTS. All IAV and FAV nodes can use this command set to access and control other devices, however, BAV nodes, because they are deployed before the architecture was defined, are controlled using legacy protocols. The level one

interoperability provides a default level of control. The FAV nodes act as control nodes and create a local representation of the IAV node, known as a device control module (DCM), that provides an API used to send control commands to the device" (Col 6, Lines 66-67; Col 7, Lines 1-12). The receive, transmit and conversion capability information of each of the devices with regard to signal format is met by the aforementioned ascertained characteristics and capabilities of the devices.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-10, 15-27 and 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogino et al. (6,038,625).

Ogino et al. teaches a system and method for providing device identification, routing, and format conversion to facilitate network transmissions. Capability information is collected from a plurality of devices using IEEE 1394 standard network, which is then used for routing data to designated devices.

With respect to claim 1, the claimed "preparing capability information of each of a plurality of devices with regard to signal format" is taught in column 6, lines 66-67

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through column 7, line 1 and in column 20, Lines 64-67 through column 21, lines 1-2.

The claimed "designating a device that ultimately receives a signal" is seen in Figure 7A, with the establishing of a connection and designation of a module ID to receive a signal. Capability information is collected into topology map 520, seen in Figure 8 and taught to be well known in the art in column 23, lines 13-15, which is used to produce transmission paths between the receiving device and transmitting device by analyzing routing information. A best route is determined by analyzing capability information including necessary format conversions by stream manager 335. Stream manager 335 identifies nodes to route data between a source and destination with consideration to necessary format conversions taught in column 18, lines 37-49. The best route is then selected that matches the transmitting device, receiving device, and signal format to provide data delivery. The claimed limitation of "issuing commands to the plurality of devices involved in the selected transmission path upon a change of the transmitted signal format" is met by Fig. 15A-15E. As seen in Fig. 15A-15E, commands are issued to devices on the transmission path to establish communications and control input/output at speeds established by the commands. "The 1394 local bus architecture creates a dynamic network within which a 1394 capable device can be inserted (e.g., hot insertion) at any time and be ready for use. Within the local bus system, a device is identified with a 6-bit physical identification number (phy\_id) which is assigned by the local bus upon a bus reset. The phy\_id for a device can change as new devices are added into or existing devices are removed from the network" (Col 3, Lines 16-23). Consequently, a device can be replaced in the network with another device of a different

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signal format and commands are issued to devices on the transmission path to establish communications and control input/output at speeds established by the commands.

With respect to claim 2, the claimed capability information comprising receiving, transmitting, and converting information" is taught in column 6, lines 66-67 through column 7, lines 1-12 with request and delivery of capability information that may involve protocol conversions depending on device characteristics.

With respect to claim 3, the claimed specifying devices in terms of order format is taught in column 22, lines 60-67 through column 23, lines 1-16; the specifying in terms of format is met as noted above by collection of formatting capability information.

With respect to claims 4 and 5, the claimed "seeking other devices capable of transmitting a signal in the same formats as the receiving device is capable of receiving" is met by the seeking of a best route by stream manager 335. As taught in column 19, lines 43-54 stream manager 335 works with a format manager to identify if input data formats for both source and destination are the same and making proper conversion or altering of paths in the event of a data type barrier, taught in column 18, lines 43-47, to provide the best route. As noted above, all of the devices are ordered into a topology map which is requested and used along with capability considerations to form a data route. This process is seen in flowchart 950b of Figure 15E.

With respect to claim 6, the claimed capability information being "originally possessed in each of the plurality of devices" is taught in column 3, lines 28-30 with the

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teaching that unique identifiers are determined according to IEEE 1212 standards upon manufacturing.

With respect to claim 7, the claimed plurality of devices communication with each other to determine capability information is met as noted above by devices in a network communicating to designate characteristics and create a topology map.

With respect to claim 8, the claimed "displaying the selected transmission path on a monitor" is taught with the teaching that vendor data may be displayed on a monitor in column 7, lines 36-38, which may inherently also serve as the "human interface" that helps the user understand how devices are connected, taught in column 12, lines 4 1-43.

With respect to claim 9, the claimed means and memory for storing capability information regarding signal formats of other devices is met by the memory and storage units seen in Figure 2, items 102-104. The claimed "analog input terminal" is not explicitly taught but examiner notes column 17, lines 14-17 teaches that the stream type may be analog media and therefore an analog connection is inherent. Furthermore, while an explicit digital interface and digital input/output terminal is not taught, as noted in column 8, lines 5-7 support for a digital television is provided, which inherently contains the claimed digital interface and digital input/output terminals. The claimed controller to produce transmission paths is met by processor 101 of Figure 2, which controls stream manager 335 and encompassed data format manager (col. 16:55-62, col. 9: 1-5). To these means commands are issued to control communications as noted in response to claim 1. The claimed "decoder coupled to the digital input/output

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interface" is met by video/audio receiver (decoder) unit 106 of Figure 2, which may inherently be coupled to a digital I/O interface.

Claim 10 is met as noted above in response to claim 2.

With respect to claim 15, the claimed storage means being a configuration ROM is met by non-volatile memory (ROM) 103 of Figure 2.

With respect to claim 16, the claimed memory for storing capability information being RAM is met by volatile memory (RAM) unit 102 of Figure 2.

With respect to claim 17, the claimed controller operating according to a series of instructions is met by processor 101 operating according to instructions stored in memory units 102-104 of Figure 2.

Claim 18 is met as noted in response to claim 8 above.

With respect to claim 19, all of the limitations are met as noted above in response to claim 1 with the additional limitations of "displaying the selected transmission path on a monitor," which is met by Ogino as noted above in response to claim 8.

Claims 20-25 are met as noted above in response to claims 2-7.

With respect to claim 26, all of the limitations are met as noted above in response to claim 9 with the additional limitation of "a monitor coupled to one of an output of the decoder and the analog input terminal." The additional limitation is met by Fig. 1C, Items 16 and 18.

Claim 27 is met as noted above in response to claim 10.

Claims 31-32 are met as noted above in response to claims 15-16.



***Allowable Subject Matter***

4. Claims 11-14 and 28-30 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows.

- The Shteyn (6,199,136) reference discloses a method and apparatus for a low data-rate network to be represented on and controllable by high data-rate home audio/video interoperability (HAVi) network.
- The Freeman (6,314,459) reference discloses a home-network auto configuration system.
- The Schwager (2002/0029271) reference discloses a method to control a network device in a network comprising several devices.
- The Zintel et al. (6,725,281) reference discloses the Synchronization of controlled device state using state table and eventing in data-driven remote device control model.
- The HAVi Specification (Version 1.0 beta).

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 703-305-0345. The examiner can normally be reached on M-F: 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM  
November 29, 2004

  
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